

WHAT IS CLAIMED IS:

1. A cargo trailer having a thin side wall extending between and connected to a bottom rail and a top rail, comprising;

a plurality of thin vertical posts regularly spaced along the bottom and top rails, each said post having a hat-shaped cross section with a central trough portion between two brim portions forming a post thickness having inner and outer planar surfaces, each said post having a bottom portion overlapping the bottom rail on the inside of the bottom rail, said bottom portion of each post being inwardly offset and having a thinner post thickness than the portion of the post extending between the bottom and top rails to change the location of the centroid of said post relative to the inner planar surface at said bottom portion;

a plurality of vertical, adjacent outer plates mounted on the outer planar surfaces of said posts; and

a plurality of vertical, adjacent liner panels mounted on the inner surfaces of said posts.

2. The cargo trailer thin side wall of claim 1, wherein the offset of the bottom portion of said post is in an amount to centrally locate the centroid of the post in the inside-to-outside direction.

3. The cargo trailer thin side wall of claim 1, wherein the offset of the bottom portion of some of said plurality of thin posts is different than others of said plurality of thin posts.

4. The cargo trailer thin side wall of claim 1, wherein the offset of the bottom portion of at least some of said plurality of thin posts is in an amount substantially equal to the thickness of the bottom rail at the location of said bottom portion of said thin post.

5. The cargo trailer thin side wall of claim 4, wherein said outer plates extend downwardly over and are mounted on the exterior of the bottom rail.

6. The cargo trailer thin side wall of claim 1, wherein each said post has a top portion overlapping the top rail on the inside of the top rail, said top portion of each post being inwardly offset and having a thinner post thickness than the portion of the post extending between the top and bottom rails.

7. The cargo trailer thin side wall of claim 1, wherein said bottom portion of each post is formed with a groove in the trough portion for maintaining the width of the post substantially the same along its length.

8. The cargo trailer thin side wall of claim 1, wherein said central trough portion of said post forms said inner planar surface which is continuous along the entire length of said post including said offset bottom portion.

9. The cargo trailer thin side wall of claim 8, wherein said liner panels are mounted in coplanar relation with said inner planar surface of said plurality of posts.

10. The cargo trailer thin side wall of claim 1, wherein said two brim portions of each said post forms said outer planar surface, and said outer plates are mounted on said outer planar surfaces of said plurality of posts.

11. A cargo trailer having a thin wall extending between and connected to a bottom rail and a top rail, comprising;

a plurality of thin vertical posts regularly spaced along the bottom and top rails, each said post having a hat-shaped cross section with a central trough portion between two brim portions forming a post thickness having inner and outer planar surfaces, each said post having a bottom portion overlapping the bottom rail on the inside of the bottom rail, said bottom portion of each post being inwardly offset and having a thinner post thickness than the portion of the post extending between the bottom and top rails;

a flat stress plate extending vertically along at least a portion of the outer planar surface of at least some of said posts, each stress plate extending over said trough portion and mounted on said two brim portions;

a plurality of vertical, adjacent outer plates mounted on the exterior surfaces of said posts; and

a plurality of vertical, adjacent liner panels mounted on interior surfaces of said posts.

12. The cargo trailer thin side wall of claim 11, wherein said stress plate extends along at least a portion of said bottom portion of said posts.

13. The cargo trailer thin side wall of claim 11, wherein said stress plate extends along the entire bottom portion of said posts.

14. The cargo trailer thin side wall of claim 13, wherein said stress plate extends a substantial distance above said bottom portion of said posts.

15. The cargo trailer thin side wall of claim 11, wherein the entire said stress plate is located immediately above said bottom portion of said posts.

16. The cargo trailer thin side wall of claim 11, wherein said stress plate on some said posts extends along the entire bottom portion of those posts, and the entire said stress plate on other said posts is located immediately above said bottom portion of said posts.

17. The cargo trailer thin side wall of claim 11, wherein the offset of the bottom portion of some of said plurality of thin posts is different than others of said plurality of thin posts.

18. The cargo trailer thin side wall of claim 11, wherein the offset of the bottom portion of at least some of said plurality of thin posts is in an amount substantially equal to the thickness of the bottom rail at the location of said bottom portion of said thin post.

19. The cargo trailer thin side wall of claim 18, wherein said outer plates extend downwardly over and are mounted on the exterior of the bottom rail.

20. The cargo trailer thin side wall of claim 11, wherein said two brim portions of each said post forms said outer planar surface, and said outer plates are mounted on said outer planar surfaces of said plurality of posts.

21. A cargo trailer having thin side walls mounted to top and bottom side rails, each side wall comprising:

a plurality of adjacent outer plates having regularly spaced vertical rows of holes;

a plurality of thin posts regularly spaced along the inside of the outer plates, the thin posts being generally hat-shaped in cross-section with a central trough between a pair of brim flanges and a row of holes along each said brim flange matching the rows of holes in said outer plates;

each said thin post having a bottom portion adjacent the inside of the bottom side rail, said bottom portion being offset inwardly and thinner in the inside-to-outside direction than said thin post above said bottom portion, and holes in the bottom side rail matching the holes in the post brim flanges in said bottom portion;

a plurality of liner panels with one liner panel positioned inside of and extending between each pair of said thin posts, the liner panels being generally u-shaped in cross section with flanges on each edge of the u-shape overlapping said post brim flanges, a row of holes along each said liner panel flange matching the rows of holes in said outer plates and thin post brim flanges; and

fasteners passing through each of the holes in said outer plates, bottom side rails thin post brim flanges and liner panel flanges for connecting said outer plates, posts and liner panels together and to the bottom side rail.

22. The cargo trailer thin side wall of claim 21, wherein the offset of the bottom portion of said post is in an amount to centrally locate the centroid of the post in the inside-to-outside direction.

23. The cargo trailer thin side wall of claim 21, wherein the offset of the bottom portion of some of said plurality of thin posts is different than others of said plurality of thin posts.

24. The cargo trailer thin side wall of claim 21, wherein the offset of the bottom portion of at least some of said plurality of thin posts is in an amount substantially equal to the thickness of the bottom rail at the location of said bottom portion of said thin post.

25. The cargo trailer thin side wall of claim 24, wherein said outer plates extend downwardly over and are mounted on the exterior of the bottom rail.

26. The cargo trailer thin side wall of claim 21, wherein each said post has a top portion overlapping the top rail on the inside of the top rail, said top portion of each post being inwardly offset and having a thinner post thickness than the portion of the post extending between the top and bottom rails.

27. The cargo trailer thin side wall of claim 21, wherein said bottom portion of each post is formed with a groove in the trough portion for maintaining the width of the post substantially the same along its length.

28. The cargo trailer thin side wall of claim 21, further including a flat stress plate extending vertically along at least a portion of the exterior of at least some of said thin posts, each said stress plate extending over said central trough and mounted on said two brim flanges of said post.

29. The cargo trailer thin side wall of claim 28, wherein said stress plate extends along at least a portion of said bottom portion of said posts.

30. The cargo trailer thin side wall of claim 28, wherein said stress plate extends along the entire bottom portion of said posts.

31. The cargo trailer thin side wall of claim 30, wherein said stress plate extends a substantial distance above said bottom portion of said posts.

32. The cargo trailer thin side wall of claim 28, wherein the entire said stress plate is located immediately above said bottom portion of said posts.

33. The cargo trailer thin side wall of claim 28, wherein said stress plate on some said posts extends along the entire bottom portion of those posts, and the entire said stress plate on other said posts is located immediately above said bottom portion of said posts.

34. A cargo trailer having thin side walls mounted to top and bottom side rails, each side wall comprising a plurality of adjacent outer plates, a plurality of thin posts and a plurality of interior liner panels, each said post being generally hat-shaped in cross section with a central trough between a pair of brim flanges;

each said post having a bottom portion adjacent the inside of the bottom side rail, said bottom portion being offset inwardly and thinner in the inside-to-outside direction than a portion of the thin post above said bottom portion;

matching holes in the bottom side rail, said outer plates, said posts and said liner panels; and

fasteners passing through each of the holes in the bottom side rail, said outer plates, said posts and said liner panels for connecting said outer plates, posts and liner panels together and to the bottom side rail.